



Designation: B792 – 09

Standard Specification for Zinc Alloys in Ingot Form for Slush Casting¹

This standard is issued under the fixed designation B792; the number immediately following the designation indicates the year of original adoption or, in the case of revision, the year of last revision. A number in parentheses indicates the year of last reappraisal. A superscript epsilon (ϵ) indicates an editorial change since the last revision or reappraisal.

1. Scope*

1.1 This specification covers commercial zinc alloys in ingot form for remelting for the manufacture of castings from the alloys as specified and designated as shown in **Table 1**.

1.2 Slush casting alloys are used primarily for the manufacture of hollow castings such as lighting fixtures, lamp bases, and small statues.

1.3 This specification covers two zinc alloys which are specified and designated as follows:

UNS	ASTM
Z34510	Slush Casting Alloy A
Z30500	Slush Casting Alloy B

1.4 The values stated in inch-pound units are to be regarded as standard. The values given in parentheses are mathematical conversions to SI units that are provided for information only and are not considered standard.

1.5 *This standard does not purport to address all of the safety concerns, if any, associated with its use. It is the responsibility of the user of this standard to become familiar with all hazards including those identified in the appropriate Material Safety Data Sheet (MSDS) for this product/material as provided by the manufacturer; to establish appropriate safety and health practices, and determine the applicability of regulatory limitations prior to use.*

2. Referenced Documents

2.1 The following documents of the issue in effect on date of order acceptance form a part of this specification to the extent referenced herein:

2.2 *ASTM Standards*:²

B899 Terminology Relating to Non-ferrous Metals and Alloys

B908 Practice for the Use of Color Codes for Zinc Casting Alloy Ingot

¹ This specification is under the jurisdiction of ASTM Committee B02 on Nonferrous Metals and Alloys and is the direct responsibility of Subcommittee B02.04 on Zinc and Cadmium.

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² For referenced ASTM standards, visit the ASTM website, www.astm.org, or contact ASTM Customer Service at service@astm.org. For *Annual Book of ASTM Standards* volume information, refer to the standard's Document Summary page on the ASTM website.

TABLE 1 Chemical and North American Color Code Requirements^{A,B}

Color Code ^C	Composition, %	
	UNS Z34510 Slush Casting Alloy A	UNS Z30500 Slush Casting Alloy B
	Black/Red	Black/Orange
Element		
Copper	0.2–0.3	0.1 max
Aluminum	4.50–5.00	5.25–5.75
Lead	0.007 max	0.007 max
Cadmium	0.005 max	0.005 max
Tin	0.005 max	0.005 max
Iron	0.100 max	0.100 max
Magnesium	0.010 max	0.010 max
Zinc	Remainder	Remainder

^A The following applies to all specified limits in this table. For purposes of determining conformance with this specification, the observed or calculated value obtained from analysis shall be rounded off "to the nearest unit" in the last right-hand place of figures used in expressing the specified limit, in accordance with the rounding method of Practice E29.

^B UNS designations were established in accordance with Practice E527.

^C Refer to Practice B908. (Note: Colors indicated are for North American applications.)

E29 Practice for Using Significant Digits in Test Data to Determine Conformance with Specifications

E88 Practice for Sampling Nonferrous Metals and Alloys in Cast Form for Determination of Chemical Composition

E527 Practice for Numbering Metals and Alloys in the Unified Numbering System (UNS)

E536 Test Methods for Chemical Analysis of Zinc and Zinc Alloys

2.3 *ISO Standards*:³

ISO 3815-1 Zinc and zinc alloys — Part 1: Analysis of solid samples by optical emission spectrometry

ISO 3815-2 Zinc and zinc alloys — Part 2: Analysis by inductively coupled plasma optical emission spectrometry

3. Terminology

3.1 Terms shall be defined in accordance with Terminology **B899**.

4. Ordering Information

4.1 Orders for ingots under this specification shall include the following information:

³ Available from American National Standards Institute (ANSI), 25 W. 43rd St., 4th Floor, New York, NY 10036, http://www.ansi.org.

*A Summary of Changes section appears at the end of this standard.